Application No. 10/774,116
Reply to Office Action of May 3, 2006

THE CLAIMS

Listing of claims:

1.   (CURRENTLY AMENDED) A method for measuring receiver mixer IQ mismatch in a transceiver, the method comprising:

providing a training signal for a receiver mixer, the training signal having periodic, uncorrelated I and Q signals;

determining a phase mismatch in the receiver mixer from IQ correlation over a unit period; and

determining a gain mismatch in the receiver mixer from a power estimate of both I and Q signals for the unit period.

2.   (CURRENTLY AMENDED) The method of claim 1 wherein providing a training signal ~~further~~ comprises closing an RF signal path between a transmitter and the receiver mixer and generating the training signal with the transmitter.

3.   (CURRENTLY AMENDED) The method of claim 1 ~~further~~ comprising estimating the IQ mismatch iteratively.

4.   (CURRENTLY AMENDED) The method of claim 3 ~~further~~ comprising utilizing a pre-compensated signal as a measurement signal for the iterative estimation.

5.   (CURRENTLY AMENDED) The method of claim 3 ~~further~~ comprising performing post-correction using a latest available correction parameter and ~~further~~ estimating residual mismatch from post-correction signals.

6.   (CURRENTLY AMENDED) The method of claim 1 ~~further~~ comprising utilizing matrix multiplication to perform mismatch compensation.

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7.   (CURRENTLY AMENDED) A system for estimation of receiver mixer IQ mismatch during signal modulation, the system comprising

a transceiver, the transceiver including a transmitter and a receiver, the transmitter providing a training signal for a receiver mixer, the training signal having periodic, uncorrelated I and Q signals; and

a processor coupled to the transceiver, the processor determining a phase mismatch in the receiver mixer from IQ correlation over a unit period, and determining a gain mismatch in the receiver mixer from a power estimate of both I and Q signals for the unit period.

8.   (ORIGINAL) The system of claim 7 wherein the transmitter provides a training signal on a closed an RF signal path between the transmitter and the receiver mixer.

9.   (CURRENTLY AMENDED) The system of claim 7 wherein the processor further estimates the IQ mismatch iteratively.

10.   (CURRENTLY AMENDED) The system of claim 9 wherein the processor further utilizes a pre-compensated signal as a measurement signal for the iterative estimation.

11.   (CURRENTLY AMENDED) The system of claim 9 wherein the processor further performs post-correction using a latest available correction parameter and further estimates residual mismatch from post-correction signals.

12.   (CURRENTLY AMENDED) The system of claim 7 wherein the processor further utilizes matrix multiplication to perform mismatch compensation.

13.   (CURRENTLY AMENDED) A method for measuring receiver mixer IQ mismatch in a transceiver, the method comprising:

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utilizing a transmitter to provide a training signal for a receiver mixer, the training signal having periodic, uncorrelated I and Q signals; and

utilizing a processor to determine a phase mismatch in the receiver mixer from IQ correlation over a unit period, and to determine a gain mismatch in the receiver mixer from a power estimate of both I and Q signals for the unit period.

14.   (CURRENTLY AMENDED) The method of claim 13 wherein utilizing a transmitter further comprises generating the training signal with the transmitter on a closed RF signal path between a transmitter and the receiver mixer.

15.   (CURRENTLY AMENDED) The method of claim 13 wherein utilizing a processor further comprising utilizing the processor for estimating the IQ mismatch iteratively.

16.   (CURRENTLY AMENDED) The method of claim 15 further comprising utilizing a pre-compensated signal as a measurement signal for the iterative estimation.

17.   (CURRENTLY AMENDED) The method of claim 15 further comprising performing post-correction using a latest available correction parameter and further estimating residual mismatch from post-correction signals.

18.   (CURRENTLY AMENDED) The method of claim 13 further comprising utilizing the processor for matrix multiplication to perform mismatch compensation.

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